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AUTHOR Rice, Dale R.; Doan, Robert L.
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ABSTRACT

Happy, neutral, and unhappy visual expressions were combined with positive, neutral, and negative intonations of positive, neutral, and negative messages to investigate congruent and incongruent verbal/nonverbal classroom communication. The 53 students in the study viewed pictures of their teacher, listened to a recording of their teacher, then indicated whether the picture and the spoken sentence matched. Seeking to expand on right-left brain functioning, the researchers conducting the study presented the picture tachistoscopically to the students' right or left visual fields. The data showed that the expression on the classroom teacher's face and the intonation of the teacher's verbal statement had a greater impact on the subject's response time and accuracy level than did the content of the verbal statement. When a contradiction existed between the verbal and nonverbal cue presentations, the children relied on the nonverbal component of the presentation as the indicator of the accuracy of the communication event. Presentations to the right hemisphere produced more accurate interpretations of the nonverbal components of the messages than presentations to the left hemisphere. (Suggested readings related to self-concept, classroom expectations, and hemispheric processing are attached.) (RL)

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# Interpreting Congruent and Incongruent Verbal and Nonverbal Classroom Communication Cues

by

Dale R. Rice and Robert L. Doan

College of Education

University of South Alabama

Mobile, Alabama 36688

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# Interpreting Congruent and Incongruent Verbal and Nonverbal Classroom Communication Cues

## Introduction

The ability to communicate and interact effectively in social and educational settings depends upon a multitude of factors. One factor rests upon a person's ability to correctly communicate and receive information during the many verbal and nonverbal interactions which occur daily. Verbal and nonverbal exchanges are of great importance and are highly influential. This is especially true in an educational setting. Positive or negative verbal and/or nonverbal communication can affect a student's self image. Therefore, effective communication in an educational setting is of utmost importance. Teachers must do everything in their power to help build positive and growing self-images in children. These self-images come from a variety of interpersonal actions occurring between the teacher and the student. Research has shown that children mainly gain reflections of their self-image from the adults around them, especially parents and teachers. This paper will focus upon the communication occurring between the teacher and the student.

Recent studies have shown that the self-image of students affects the way in which individual children approach tasks in school and ultimately contributes to their success or failure. Thus, the improvement of the self-image of children in school should be of vital concern and of utmost importance in the affective education of

children.

The verbal exchange from a teacher to a child is very meaningful often affecting the child's self-image. Numerous research studies support this obvious conclusion. However, the accompanying nonverbal interchange of messages also affects the child's self-image. This important area of classroom communication has been largely ignored in classroom communication research. The ignoring of indepth study of the nonverbal communication which occurs in the classroom and its impact during the total communication process between the teacher and student omits a vital component of the communication process when considering how it might affect a child's self-image.

Recent research has determined that the left hemisphere of the brain interprets information in a logical, sequential manner while the right hemisphere approaches the same stimuli in a nonverbal, spatial manner.

During the communication process exactly which message, either the verbal or the nonverbal, carries the dominate meaning is difficult to determine. This study for determining dominance of communication modality has produced evidence that certain brain hemisphere dominance factors play an important role in determining receptive dominance of communication.

Results of the Study

Research on verbal-nonverbal communications and right-left brain functioning has revealed several interesting patterns and results. Insight into the child's interpretation of congruent and incongruent verbal-nonverbal communication was obtained by using a tachistoscopic

presentation of nonverbal teacher facial expressions into the right and left hemifield, preceded by congruent or incongruent verbal statements with various tonal inflections,

Students in the study were required to view tachistoscopicly presented pictures of their teacher displaying three facial expressions: happy or pleased, neutral, and unhappy or displeased. The pictures were presented at 150 milliseconds to either the left or right visual fields of the students. Immediately after the picture presentation, the students were presented with a recording of their teacher saying either a positive, neutral or negative sentence with positive, neutral or negative intonation. Thus, the verbal content and intonation of the teacher's spoken sentences produced eight possible combinations.

After the picture of their teacher was flashed on the screen, the student was required to record whether or not the picture matched or did not match the spoken sentence. The student responded by pressing a button labeled either "yes" or "no", and response accuracy and reaction time was recorded for each response. It is important to remember that pictures flashed to the left visual field at 150 milliseconds were received only by the right hemisphere and vice versa. Each student received eighty trials.

After all of the 53 randomly selected students in the study had undergone the experimental treatment, the data were analyzed by the analysis of variance. The results collected revealed that when a contradiction existed between the verbal and nonverbal cue presentations, the children in the study relied on the nonverbal

component of the presentation as the indicator of the accuracy of the communication event. In this particular study, when incongruent verbal and nonverbal communication systems interact the nonverbal communication present in the interaction represented the dominant source of meaning. The children in the study <u>believed the nonverbal cues over the verbal communication.</u>

Another interesting result of the study revealed that the right hemisphere was more accurate in the interpretation of the nonverbal components of the presentation than the left hemisphere. This finding suggests that when situations arise in the elementary classroom in which the child must choose one explanation over the other (i.e. verbal, non-verbal), the right hemisphere is actively involved and more often than not, the nonverbal communication is chosen as the indicator of the true meaning of the message. It is obvious that when this situation occurs in the elementary classroom, which it often does, the outcome is sure to result in stress and confusion on the part of the student.

The findings of this investigation indicate the following:

1. When a discrepancy or contradition existed between verbal and nonverbal stimuli presentations, subjects relied on the nonverbal cues (voice inflection of the teacher) or picture of the teacher's facial expression as the true indicator
2. Subjects' overall performance on accuracy level to nonverbal stimuli presented to the right hemisphere was superior to subjects' left hemisphere performancce during all experimental trials.
3. Subjects' accuracy level performance to right hemisphere presentations was superior to left hemisphere presentation during experimental conditions when cue salience was strong.
4. Subjects' accuracy level performance to left hemisphere presentations was superior to right hemisphere performance during experimental conditions when cue salience as weak.
5. Factors accounting for the greatest amount of variance in subject's performance were the three main effects are voice

intonation (20 percent) facial expression (7 percent), hemifield presentation (12 percent) and the interaction of voice intonation and hemifield accounted for 11 percent of the variance.

## Summary and Implications

The outcome of the study raises some serious questions concerning teaching and communication. The study found that the right hemisphere interprets nonverbal cues more quickly than the left hemisphere and is more accurate at the interpretation. The data collected suggest that the expression on a classroom teacher's face and the intonational aspects of the teacher's verbal statement had a greater impact on the subject's response time and accuracy level than the content of the verbal statement. In addition, data analyses revealed that an increase in reaction time does not insure a more accurate response, suggesting that nonverbal information presented to the left hemisphere may therefore be processed in the right hemisphere. This in turn causes an increase in response time and also a loss of accuracy through interhemispheric transfer of the information. In most match situations (nonverbal picture to verbal-intonation statements) the right hemisphere was superior during mismatch conditions only when the verbal or intonational aspect of the statement was neutral. Therefore, nonverbal tonal and facial expressions play an extremely important role in a child's interpretation of the communication from a teacher in the classroom. A series of incongruent messages sent by a teacher to a student could affect the student's attitude and self-concept in the learning situation. Also, it appears that the nonverbal behavior of teachers has even more of an impact on students than previously thought. It is possible that the nonverbal behavior

of teachers could have a bearing on the way students see themselves. Therefore, it becomes important for teachers to do all they can to improve their classroom communication. Teachers need to be made aware that when a discrepancy or contradiction exists between their verbal and nonverbal statements, children rely on nonverbal messages as the more valid indicator of the intent of the communication. When a child is talking to the teacher and the teacher's eyes wander around the room, the student may be unconvinced of teacher interest and attention. Although the teacher pretends to listen by saying, "All right," "Good", "I agree", etc. chances are the child will think, "She wasn't listening, I know, she wasn't interested in what I was saying. She wasn't even looking at me."

Teachers need to become aware of their nonverbal behaviors during classroom communication, and to look for possible sources of communicative breakdown between them and the student. Actions do speak louder than words. It is important for teachers to strengthen the consistency of communication by identifying verbal and nonverbal cues that may be "misread" by students. One technique would be to video-tape a teacher's lesson and carefully analyze movements, eye contact, and other nonverbal behaviors. Another way would be to ask students how they perceive teacher's nonverbal communication as compared to their verbal behaviors.

Effectively using nonverbal cuing to support verbal communication will add a powerful tool to a teacher's skills and will alleviate much of the inner conflict experienced by students when confronted with mixed messages.

New and dramatic research suggests different processing styles of the right and left brain hemispheres. It is important that teachers become aware of varying process styles which influence the questionable authenticity of a verbal-nonverbal communication event. Suggested readings related to self-concept, classsroom expectations, and hemispheric processing are suggested as references for this paper.

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